

Amendments to the claims

1-12. (Canceled)

13. (Previously presented) A device comprising an electrochemical cell, said electrochemical cell comprising:

a membrane electrode assembly defining an anode side of said cell and a cathode side of said cell;

a first flow field plate for the cathode side of said cell, said first flow field plate comprising a plurality of first channels separated by first lands, wherein said plurality of first channels and first lands run between a first set of fluid manifolds; and

a second flow field plate for the anode side of said cell, said second flow field plate comprising a plurality of second channels separated by second lands, wherein said plurality of second channels and second lands run between a second set of fluid manifolds, wherein

said membrane electrode assembly is interposed between said first and second flow field plates,

a pitch defined by said first flow field plate is less than a pitch defined by said second flow field plate,

at least one of said first lands and at least one of said second lands are each provided in a pattern of alternating angles and crests in a plane parallel to both of said flow field plates, said pattern of said first lands and said pattern of said second lands are orientated relative to each other across the membrane electrode assembly such that said first and second lands crisscross along said alternating angles and overlap on said crests and such that said plurality of first lands align with said plurality of second land and do not align with said plurality of second channels, and

said pitch of each said first and second flow field plates is constant between said first and second sets of fluid manifolds.

14. (Original) The device according to claim 13 wherein the pitch defined by said second flow field plate is approximately twice as large as the pitch defined by said first flow field plate.

15. (Original) The device according to claim 13 wherein at least one of said second lands has a cross sectional width wider than a cross sectional width of at least one of said first lands.

16. (Original) The device according to claim 13 wherein said first channels define a cross sectional width approximately equal to a cross sectional width defined by said second channels.

17. (Original) The device according to claim 13 wherein a substantial number of said second lands define a cross sectional width greater than a cross sectional width defined by a substantial number of said first lands.

18. (Original) The device according to claim 13 wherein a substantial number of said second channels define a cross sectional width approximately equal to a cross sectional width defined by a substantial number of said first channels.

19. (Original) The device according to claim 13 wherein a majority of said second lands define a cross sectional width greater than a cross sectional width defined by a majority of said first lands.

20. (Original) The device according to claim 13 wherein a majority of said first channels define a cross sectional width approximately equal to a cross sectional width defined by a majority of said second channels.

21. (Original) The device according to claim 13 wherein substantially all of said second lands define a cross sectional width greater than a cross sectional width defined by substantially all of said first lands.

22. (Original) The device according to claim 13 wherein substantially all of said first channels define a cross sectional width approximately equal to a cross sectional width defined by substantially all of said second channels.

23. (Original) The device according to claim 13 wherein said first and second channels each have a cross sectional width of 1.5 mm or less.

24. (Original) The device according to claim 13 wherein each of said flow field plates have a thickness of 1 mm or less.

25. (Original) The device according to claim 13 wherein a cross sectional width of each said first lands is 1mm or less.

26. (Original) The device according to claim 13 wherein a cross sectional width of each said second lands is about 3 times wider than a cross sectional width of each said first lands.

27. (Original) The device according to claim 26 wherein said first channels define a cross sectional width approximately equal to a cross sectional width defined by said second channels.

28. (Cancel)

29. (Original) The device according to claim 13 wherein said first and second channels each have a depth of about 1 mm or less.

30. (Original) The device according to claim 13 wherein the pitch defined by said first flow field plate is about 2.5 mm or less.

31. (Previously Presented) The device according to claim 13 wherein said device further comprises structure defining a fuel cell of the proton exchange membrane type.

32. (Original) The device according to claim 31 wherein said device further comprises structure defining a vehicle powered by said fuel cell.

33. (Cancel)

34. (Cancel)

Serial No.: 10/669,479

Docket No.: GP-303584

35. (Previously Presented) The device according to claim 13 wherein said first and second patterns ensure at least about 30% land-to-land alignment across said membrane electrode assembly interposed between said first and second flow field plates.

36-40. (Cancel)

41. (Original) The device according to claims 13 wherein said first and second channels are serpentine.

42-45. (Cancel)